chamber, the reservoir chamber is larger than the pressure chamber of the master cylinder, and

the brake fluid control device includes a brake condition selection device which selects either of a first condition in which the brake is compressed by the first compressing device, or a second condition in which the brake is compressed by the second compressing device based on the type of the failure detected by the failure detector.--

C10 D12 cont'd

--30. A brake device having a fluid pressure source device which generates a fluid pressed based an operation state of a brake operating member, the brake device comprising:

a fluid source pressure detector which detects the pressure generated in the fluid pressure source device;

a failure determining device which determines that there is a first failure when a combination of the operation state of the brake and the fluid pressure is a first combination state, and determines that there is a second failure being different from the first failure if the combination of the operation of the brake and the fluid pressure is a second combination is a second combination being different from the first combination state; and

a brake fluid control device which controls the brake fluid pressure in a first way when the failure determining device determines that there is the first failure, and control the brake fluid in a second way being different from the first way when the failure determining device determines that there is the second failure.--

REMARKS

Claims 1, 3-12, 14 and 16-30 are pending in this application. By this Amendment, claims 22-30 are added and claims 1, 3, 5, 6, 8 and 9 are amended. No new matter is added.

The attached Appendix includes marked-up copies of each rewritten paragraph (37 C.F.R. §1.121(b)(iii) and claim (37 C.F.R. §1.121(c)(1)(ii)).

Applicants wish to express their appreciation to Examiner Burch for the courtesies extended to Applicants' representative during the interview held December 16, 2002. The

discussion is incorporated into the remarks below and constitutes Applicants' record of the interview.

In paragraph 10, on page 6 of the Office Action, it was indicated that claims 1, 3-12 and 14 would be allowable if rewritten to overcome the rejections under 35 U.S.C. §112, second paragraph and to include all of the features of the base claim and any intervening claim. Applicants gratefully appreciate the indication of allowability and submit that claims 1, 3-12 and 14 have been rewritten to overcome the rejection under 35 U.S.C. §112, second paragraph. Thus, allowability for claims 1, 3-12 and 14 are respectfully requested.

In paragraph 11, on page 6 of the Office Action, claim 19 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the features of the base claim and any intervening claims. Applicants gratefully appreciate the indication of allowable subject matter in claim 19. However, it is respectfully submitted that claims 16-18, 20 and 21 are also allowable in view of the foregoing amendments and following remarks.

In paragraph 1, page 2 of the Office Action, the drawings were objected because master pressure PMO in Fig. 9 needed clarification. As discussed and agreed during the interview, Fig. 9 illustrates the relationship between the master cylinder pressure and the brake operating power. For example, the master pressure PMO line describes, at the time that the brake operating power is in the first predetermined operation power F0, the brake device at a normal condition when the master pressure PMO is above the first predetermined fluid pressure Pth1. However, if the master pressure PMO falls below the first predetermined fluid pressure Pth1, then there is an indication of failure of the servo function or small amounts of leakage. F0' describes the set load of the return spring of the master cylinder 14, whereby the fluid pressure is generated in the pressure chamber. Accordingly, reconsideration and withdrawal of the objection are respectfully requested.

In paragraph 3, on page 2 of the Office Action, the specification is objected to under 35 U.S.C. §132 because it introduces new matter.

It is respectfully submitted that the new matter objection has been rendered moot due to the cancellation of the features in the specification and drawings. Withdrawal of the objection is respectfully requested.

In paragraph 4, on page 3 of the Office Action, the specification was objected to as failing to provide proper antecedent basis for the claimed subject matter in claims 8 and 9. By this Amendment, claims 8 and 9 are amended to obviate the objection. Reconsideration and withdrawal of the objection are respectfully requested.

In paragraph 7, on page 3 of the Office Action, claims 1, 3-12 and 14 were rejected under 35 U.S.C. §112, second paragraph. By this Amendment, claims 1, 3, 5 and 6 have been amended as suggested by the Examiner. With respect to claims 8 and 9, the term "reservoir tank" is amended to "reservoir chamber" and proper antecedent basis for "reservoir chamber" can be found, for example, in paragraph [0023] in the specification. Reconsideration and withdrawal of the rejections are respectfully requested.

In paragraph 9, on page 5 of the Office Action, claims 16-18, 20 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over JP-10147236 to Yamada et al. ("Yamada") in view of U.S. Patent 4,867,509 to Maehara et al. ("Maehara") and U.S. Patent Application 2002/0030402 to Harada et al. ("Harada"). The rejection is respectfully traversed.

Yamada fails to disclose, teach or even suggest a failure detector which detects and distinguishes between different types of failures of the brake device based on the pressure detected by the fluid source pressure detector and the operating amount detected by the brake operating amount detector, as recited in claim 16.

Yamada merely discloses a microprocessor CPU that determine whether an abnormality determination of an accumulator or a motor to be carried out on the basis of a

pressure detection signal from the pressure switch PH (step H) (col. 9, lines 12-14 and 22-25), and on the basis of a motor current value Im (step PI) (col. 11, lines 6-13 and 31-37). However, Applicants' claimed invention discloses a failure detector that detects the failures based on the pressure detected by the fluid source pressure detector and the operating amounts detected by the brake operating amounts detector, as recited in claim 16. That is, Yamada detection of abnormality is based on the pressure switch PH and motor current value Im, whereas Applicants' claimed invention recites the failures based on the pressure detected by the fluid source pressure detector and the operating amount detected by the brake operating amount detector.

Further, Yamada also discloses a motor lock abnormality or an accumulator low pressure abnormality based on an detection signal from a pressure switch PH and a brake pedal depression signal from a brake switch BS (col. 8, lines 63-65). However, Applicants' invention specifies the combination of the operation state of the brake pedal and the generated fluid pressure, which is set so as to correspond to each type of failures that is different from each other. Thus, when the detected combination is set, it is determined that there is one failure corresponding to the detected combination, which is distinguished from the other failures. Accordingly, Yamada fails to disclose the fluid pressure generated in accordance with the operation state of the brake pedal and the accumulator pressure in Yamada cannot vary with the operation state of the brake pedal.

Further, the Office Action alleges that the brake switch BS in Yamada represents the brake operating amount detector of Applicants' invention. However, Yamada merely discloses the brake switch BS as an indicator when a brake pedal BP is depressed (col. 4, lines 55-56), and thus fails to disclose or suggest utilizing the brake pedal depressing signal to determine the abnormality of the brake device.

Accordingly, Yamada fails to disclose, teach or suggest a failure detector which detects and distinguishes between different types of failures of the brake device based on the

pressure detected by the fluid source pressure detector and the operating amount detected by the brake operating amount detector, as recited in claim 16.

Maehara merely discloses a bottoming switch 55 which turns ON when a stroke of the brake pedal exceeds a predetermined value (col. 5, lines 28-32). However, Applicants' claimed invention recites the bottoming detector that detects a bottoming condition in the master cylinder based on an increase in gradient of the brake operating amount, as recited in claim 16. By having an increasing gradient of the brake operating amount, the brake device can detect the bottoming condition accurately by detecting rapid changes in the brake operating amount. Accordingly, Maehara fails to disclose or teach the bottoming detector that detects a bottoming condition in the master cylinder based on an increase in gradient of the brake operating amount, as recited in claim 16.

Harada merely discloses the use of monitoring the depression stroke, depression speed or depression acceleration of the brake pedal (paragraph [0124], lines 10-11). However, Applicants respectfully submit that these parameters are used to detect a rapid braking, rather than to detect the failure of the brake device as recited in claim 16. Accordingly, Harada does not teach that the failure detection is carried out based on the detection signal of the depression stroke, depression speed or depression acceleration of the brake pedal, and thus would not have been obvious to one of ordinary skill in the art to have combined the abnormality detecting device of Yamada with an increasing of brake operating amount as taught by Harada.

For at least these reasons, Applicants respectfully submit that Yamada, Maehara and Harada, singularly or in combination, fail to disclose, teach or even suggest the features recited in independent claim 16. Claims 17-21, which depend from claim 16 are likewise distinguishable over the applied references for at least the reasons discussed above, as well as any additional features they recite. Reconsideration and withdrawal of the rejection under 35 U.S.C. §103 are respectfully requested.

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 3-12, 14 and 16-30 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,

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David J. Cho
Registration No. 48,078

JAO:DXC/kys

Attachments:
Petition for Extension of Time
Amendment Transmittal
Request for Continued Examination
Appendix
Request for Approval of Drawing Corrections

Date: February 27, 2003

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DEPOSIT ACCOUNT USE AUTHORIZATION
Please grant any extension necessary for entry;
Charge any fee due to our Deposit Account No. 15-0461

FIG. 1

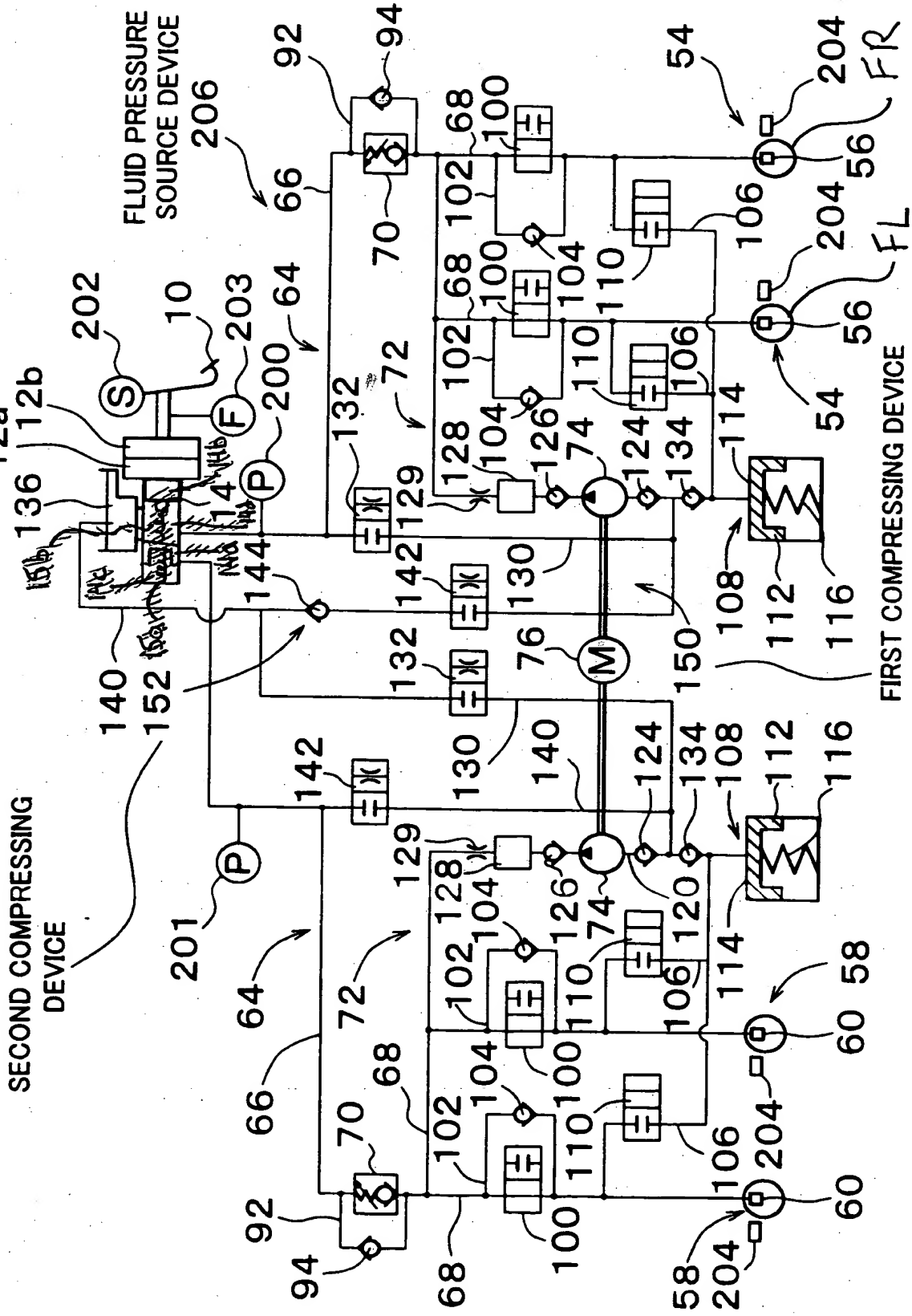

FIG. 2